

**Amendments to the Claims:**

1. (Currently amended) Method for producing a grating image of a security element, which at least has one grating field seperately perceptible with the naked eye, said method comprising the following steps:
  - defining a contour line of the grating field,
  - filling the contour line with the grating pattern, the grating pattern within the contour line being described by grating coordinates,
  - supplying the grating coordinates to a writing apparatus and
  - producing the grating pattern in a substrate with the writing apparatus and with the help of the grating coordinates.
2. (Currently Amended) Method according to claim 1, ~~characterized in that~~ wherein the grating pattern is formed by grating lines which are disposed side by side.
3. (Currently Amended) Method according to claim 2, ~~characterized in that~~ wherein as grating coordinates are selected the intersection points, the grating lines have with the contour line, ~~lying within the contour line~~.
4. (Currently Amended) Method according to claim 1, ~~characterized in that~~ wherein with the help of a data processing system the contour line of the grating field is created and filled with the grating pattern.
5. (Currently Amended) Method according to claim 1, ~~characterized in that~~ wherein the grating lines are straight or curved.

6. (Currently Amended) Method according to claim [[1]] 2, ~~characterized in that~~ wherein the grating coordinates of the grating lines are sequentially sorted according to their spatial disposition.
7. (Currently Amended) Method according to claim 6, ~~characterized in that~~ wherein the coordinates of a starting point of a grating line are sorted side by side with the respective coordinates of a starting point of a neighboring grating line and the coordinates of an end point of a grating line side by side with the respective coordinates of an end point of a further neighboring grating line.
8. (Currently Amended) Method according to claim 7, ~~characterized in that~~ wherein the starting points and end points of grating lines located side by side are connected to form a meandering processing path.
9. (Currently Amended) Method according to claim 1, ~~characterized in that~~ wherein the writing apparatus with the help of radiation causes a change of state in a radiation-sensitive material.
10. (Currently Amended) Method according to claim 9, ~~characterized in that~~ wherein the writing apparatus is guided over the radiation-sensitive material according to the grating coordinates.
11. (Currently Amended) Method according to claim 9, ~~characterized in that~~ wherein as a radiation-sensitive material a photoresist layer applied onto a substrate plate is used.

12. (Currently Amended) Method according to claim 1, ~~characterized in that~~ wherein as a writing apparatus an electron beam is used.
13. (Currently Amended) Method according to claim 9, ~~characterized in that~~ wherein after the caused change of state a metallization layer is applied onto the radiation-sensitive material and that therefrom a metallic molding is galvanically produced.
14. (Currently Amended) Method according to claim 13, ~~characterized in that~~ wherein the molding is used as an embossing die for embossing a grating image into a substrate.
15. (Currently Amended) Grating image of a security element, which has at least one image field separately perceptible with the naked eye, in which a grating pattern consisting of not interrupted grating lines is disposed, which is produced by means of a lithography instrument.
16. (Currently Amended) Grating image according to claim 15, ~~characterized in that~~ wherein as a lithography instrument focussed light radiation or a focussed particle beam, is used.
17. (Currently Amended) Grating image according to claim 15, ~~characterized in that~~ wherein the grating image has several image fields.

18. (Currently Amended) Grating image according to claim 15, ~~characterized in that~~ wherein the grating image has further image parts, which are manufactured with the help of a different technique.
19. (Currently Amended) Grating image, according to claim 15, ~~characterized in that~~ wherein the grating pattern comprises grating lines, which form a diffraction grating.
20. (Currently Amended) Grating image according to claim 15, ~~characterized in that~~ wherein the grating lines are connected to at least one meandering grating line by reversing sections disposed at their ends.
21. (Currently Amended) Grating image according to claim 15, ~~characterized in that~~ wherein the reversing distances are rounded.
22. (Previously Presented) Security element with a grating image according to claim 15.
23. (Currently Amended) Security element according to claim 22, ~~characterized in that~~ wherein the security element is a security thread, a label or a transfer element.
24. (Previously Presented) Security paper with a grating image according to claim 15.
25. (Previously Presented) Security paper with a security element according to claim 22.

- 26. (Previously Presented) Security document with a grating image according to claim 15.
- 27. (Previously Presented) Security document with a security element according to claim 22.
- 28. (Previously Presented) Security document with a security paper according to claim 24.
- 29. (Previously Presented) Transfer material with a grating image according to claim 15.
- 30-31. (Canceled)
- 32. (Currently Amended) The method of claim 3 wherein ~~the~~ grating points of the grating field lie lying within the contour line are also selected as grating coordinates.
- 33. (Previously Presented) The grating image of claim 16 wherein said particle beam is an electron beam.
- 34. (Previously Presented) A security paper with a security element according to claim 23.
- 35. (Previously Presented) A security document with a security element according to claim 23.
- 36. (Previously Presented) A security document with a security paper according to claim 25.

37. (Previously Presented) The transfer material of claim 29, comprising hot stamping foil.